

WEST

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(1 AND 2).DWPI.	2
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Search HistoryDATE: Thursday, March 13, 2003 [Printable Copy](#) [Create Case](#)

Set Name Query
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DB=DWPI; PLUR=YES; OP=ADJ

<u>L3</u>	11 and L2	2	<u>L3</u>
<u>L2</u>	\$5capsule or encapsul\$10 or en capsul\$10	52710	<u>L2</u>
<u>L1</u>	isoxazole or isoxaflutole or isoxaben	1411	<u>L1</u>

END OF SEARCH HISTORY

(FILE 'HOME' ENTERED AT 09:29:42 ON 13 MAR 2003)

FILE 'REGISTRY' ENTERED AT 09:29:54 ON 13 MAR 2003

L1 1 S ISOXABEN/CN
L2 STRUCTURE UPLOADED
L3 QUE L2
L4 50 S L2
L5 1787 S L2 FULL

FILE 'CAPLUS, USPATFULL' ENTERED AT 09:32:09 ON 13 MAR 2003

L6 432 S L5
L7 424918 S SOIL
L8 99849 S HERBICIDE
L9 46617 S WEED
L10 15 S L6 (P) L7
L11 3 S L10 AND L8 AND L9

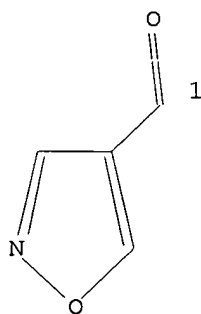
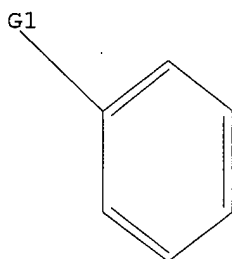
FILE 'REGISTRY' ENTERED AT 09:39:49 ON 13 MAR 2003

L12 1 S ISOXAFLUTOLE/CN
L13 100 S ?CAPSULE OR ENCAPSUL? OR EN CAPSUL?

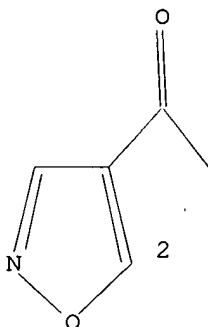
FILE 'CAPLUS, USPATFULL' ENTERED AT 09:47:44 ON 13 MAR 2003

L14 227083 S ?CAPSULE OR ENCAPSUL? OR EN CAPSUL?
L15 1 S L6 (P) L14
L16 11906 S ISOXAZOLE OR L1 OR L12 OR L6
L17 15 S L16 (P) L14
L18 1 S L17 (P) SOIL
L19 1 S L17 AND SOIL
L20 32412 S GROWTH MED?
L21 0 S L17 AND L20
L22 1870 S L16 AND L14
L23 105 S L22 AND SOIL

L2 HAS NO ANSWERS
L2 STR



G1 [01], [02]



Structure attributes must be viewed using STN Express query preparation.

L18 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:140636 CAPLUS

TITLE: Photodegradation of isoxaben on soil.

AUTHOR(S): Saunders, D. G.; Powers, F. L.

CORPORATE SOURCE: Dow AgroSciences, North American Environmental
Chemistry Laboratories, Indianapolis, IN, 46268, USA

SOURCE: Book of Abstracts, 215th ACS National Meeting,
Dallas,

March 29-April 2 (1998), AGRO-071. American Chemical
Society: Washington, D. C.

CODEN: 65QTAA

DOCUMENT TYPE: Conference; Meeting Abstract

LANGUAGE: English

AB The photodegrdn. of isoxaben, a **herbicide** used for broadleaf
weed control in turf and ornamentals, was investigated on a
Hanford sandy loam **soil** maintained at 25 .degree.C and 75% of
0.33 bar moisture content. Ph or **isoxazole** [14-C] labeled
isoxaben applied to the **soil** surface at a rate equiv. to 1.0
lb/acre was irradiated for up to 30 days using a xenon lamp. Isoxaben
photodegraded with a calcd. half-life equiv. to 60 days in summer

sunlight

at 40.degree. N latitude. One photodegradate was formed by rearrangement
of the **isoxazole** ring and reached a max. of 7% of initial. A
second degradate, identified as 2,6-dimethoxybenzamide, reached a max. of

L18 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:787158 CAPLUS

DOCUMENT NUMBER: 130:106455

TITLE: The mode of action of isoxaflutole II.
Characterization of the inhibition of carrot
4-hydroxyphenylpyruvate dioxygenase by the
diketonitrile derivative of isoxaflutole

AUTHOR(S): Viviani, F.; Little, J. P.; Pallett, K. E.

CORPORATE SOURCE: Plant Science Research Department, Rhone-Poulenc
Agriculture Ltd., Ongar/Essex, CM5 0HW, UK

SOURCE: Pesticide Biochemistry and Physiology (1998), 62(2),
125-134

CODEN: PCBPBS; ISSN: 0048-3575

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB **Isoxaflutole** is a novel **herbicide** for broadleaf and
grass **weed** control in corn and sugarcane which acts by
inhibiting 4-hydroxyphenylpyruvate dioxygenase (HPPD). In plants and
soil, **isoxaflutole** is rapidly converted to a
diketonitrile deriv. (DKN) which is the active **herbicide**
principle. The kinetics of inhibition of carrot HPPD in vitro by the DKN
showed that it is a potent tight-binding inhibitor (IC₅₀ 4.9 \pm 0.2

nM),
exhibiting a time-dependent interactions with the enzyme in its ferrous
state. DKN is a competitive inhibitor that rapidly inactivates the
enzyme

(with a const. rate of assocn. of 0.2 \pm 0.004 μ M⁻¹s⁻¹) by forming a
reversible complex that releases slowly the inhibitor in an unmodified
form. The decarboxylation coupled with redn. of mol. oxygen is accepted
as the first enzymic event of the HPPD-catalyzed reaction which occurs as
4-hydroxyphenylpyruvate binds to the internal iron of protein via its keto
acid function. The DKN of **isoxaflutole** presents a
.beta.-(1.3)-diketone moiety, a delocalized .pi. system which can mimic
the keto acid functionality of the substrate and which is also well known
for its iron-chelating properties. Since this inhibitor competes with

the
substrate for binding, it is highly probable that it chelates the ferrous
iron in the active site strongly by forming a stable ion-dipole charge
transfer complex that resembles the initial substrate-iron complex or an
early reaction intermediate. The slow release of the inhibitor in an
unmodified form also suggests that the mol. oxygen activation due to
ferrous iron generating a powerful oxidant as the inhibitor-enzyme
complex

L13 ANSWER 12 OF 12 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:237488 CAPLUS

DOCUMENT NUMBER: 128:305091

TITLE: Isoxaflutole **herbicide** soil persistence and mobility in summer corn and winter wheat crops
AUTHOR(S): Rouchaud, J.; Neus, O.; Callens, D.; Bulcke, R.
CORPORATE SOURCE: Laboratory of phytopharmacy, Catholic University of Louvain, Louvain-la-Neuve, 1348, Belg.
SOURCE: Bulletin of Environmental Contamination and Toxicology

(1998), 60(4), 577-584

CODEN: BECTA6; ISSN: 0007-4861

PUBLISHER: Springer-Verlag New York Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB For 3-4 mo following isoxaflutole (I) application to corn and winter wheat, there was a pos. relationship between the reverse of I soil concn. and the time following I treatment (2nd order kinetics). In spring corn on sandy loam, with presowing I treatment, the I half lives were 1.4., 15.0 and 12.1 days, at soil pH 5.5, 6.1 and 7.2, resp. In winter wheat, the I soil half lives were 20.7 days in sandy loam, 12.1 days in loamy sand, 10.1 days in loam, and 39.5 days in clay loam. I mobility was a function of soil type and crop.

TI Isoxaflutole **herbicide** soil persistence and mobility in summer corn and winter wheat crops

ST isoxaflutole **herbicide** soil persistence mobility crop

IT 141112-29-0, Isoxaflutole

RL: AGR (Agricultural use); PEP (Physical, engineering or chemical process); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)

(isoxaflutole **soil** persistence and mobility under corn and winter wheat)

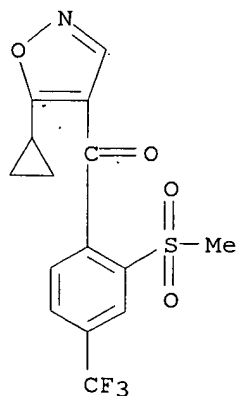
IT 141112-29-0, Isoxaflutole

RL: AGR (Agricultural use); PEP (Physical, engineering or chemical process); POL (Pollutant); BIOL (Biological study); OCCU (Occurrence); PROC (Process); USES (Uses)

(isoxaflutole **soil** persistence and mobility under corn and winter wheat)

RN 141112-29-0 CAPLUS

CN Methanone, (5-cyclopropyl-4-isoxazolyl)[2-(methylsulfonyl)-4-(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)



L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS
RN 82558-50-7 REGISTRY
CN Benzamide, N-[3-(1-ethyl-1-methylpropyl)-5-isoxazolyl]-2,6-dimethoxy-
(9CI) (CA INDEX NAME)

OTHER NAMES:

CN Benzamizole

CN Cent 7

CN EL 107

CN Flexidor

CN Gallery

CN **Isoxaben**

CN NA 8318

CN X-Pand

FS 3D CONCORD

MF C18 H24 N2 O4

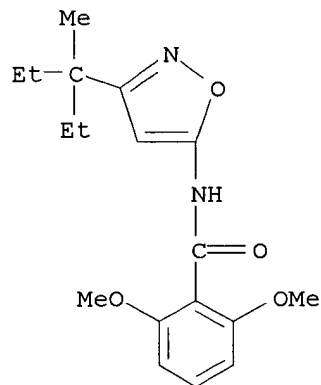
CI COM

LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS, CA, CABA,
CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CSCHEM, MEDLINE,

MRCK*,

MSDS-OHS, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL

(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

205 REFERENCES IN FILE CA (1962 TO DATE)

31 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

207 REFERENCES IN FILE CAPLUS (1962 TO DATE)